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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,402

07/18/2006

Jarkko Viinikanoja

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EXAMINER

LE, QUANG V

ART UNIT

PAPER NUMBER

2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,402	Applicant(s) VIINIKANOJA ET AL.	
	Examiner QUANG V. LE	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the application 10/586402 filed on 7/18/2006.
2. **Claims 1-27** of the Amended Claims received by the International Bureau on 29 August 2005 have been examined and are pending.

Information Disclosure Statement

3. An initialed and dated copy of Applicant's IDS form 1449 is attached to the instant office action.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Objections

5. **Claims 1-10, 12, 14, 15-19, 21, 26 and 27** are objected to because of the following informalities:

Claims 1-10, 12, 14, 15-19, 21, 26 and 27 contain reference numbers inside parentheses such as (14,15, 16.1 - 16.4) in claim 5, that cause confusions. It is suggested that these references be removed and/or replaced with proper description.

Appropriate correction is required.

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6. Claims 4-9, 13-18 and 22-25 are objected to under 37 CFR 1.75(c) as being in improper form because they reference back to multiple dependent claims 3, 10 and 19 respectively. See MPEP § 608.01(n). Accordingly, claims 4-9, 13-18 and 22-25 are not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park, Korean Patent Publication KR1998-0085622, in view of Yano, US Patent Application Publication 2003/0214712.

As per claim 1, Park teaches an electronic equipment, which includes

- camera means for forming data on an object located in the imaging direction, in which case the said camera means include at least two camera units (CAM1, CAM2) which mutual distance can be adjusted (page 5, paragraphs 6 and 7 and figure 3) and which are arranged to be turnable relative to each other (page 8, paragraph 3, "the tilt angle is changed according to the horizontal movement"). *Per page 5 paragraph 7, the*

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two cameras are separately controlled. The two camera can be tilted independently is the same as turnable relative to each other as cited in the claim.

Park fails to teach the following limitation:

- data processing means, which are arranged to process the data formed by the camera means, according to the currently chosen imaging mode of the equipment, in order to form image information and in the equipment, the mutual position of the camera units (CAM1, CAM2) relative to each other is arranged to be altered to correspond to the current imaging mode, characterized in that, the turning of the camera units (CAM1, CAM2) relative to each other is arranged with the adjustment of the distance between the camera units (CAM1, CAM2).

However, Yano teaches a multi-eye image sensing apparatus that has two camera sensing systems and a signal processor **20** that process the image signals obtained by the cameras. The processor **20** processes the image data correspond to the two modes of operation of the apparatus, three-dimensional and panoramic modes (paragraph 204).

Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate the signal processor taught by Yano into Park apparatus for stereocamera so as to provide a stereocamera that can produce stereo image in real time.

As per claim 2, Park and Yano teach an equipment according to Claim 1, Yano further discloses characterized in that the mutual position of the camera units (CAM1, CAM2) relative to each other is arranged to be altered by the camera units (CAM1, CAM2) being manually moved by the user (paragraph 0209). *Since there is no motor control for the optical system, it is assumed that switching between three-dimension and panoramic mode by moving the optical system block is performed manually by the user.*

Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to make the camera system taught by Park manually controlled as taught by Yano so as to make the camera system smaller since motor assemblies are no longer required. Such camera system can be made portable.

8. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Park, in view of Yano as applied to claims 1 or 2 above, further in view of Hamaguchi, US Patent No. 6,809,771.

As per claim 3, Park and Yano teach an equipment according to Claim 1 or 2, they fail to disclose the equipment additionally includes a display component arranged on one side of the equipment, characterized in that the camera units (CAM1, CAM2) are arranged on the opposite side of the equipment relative to the display component.

However, Hamaguchi teaches a multiple lens unit for obtaining three-dimensional data that has two camera lens on one side (figure 1) and two displays on the opposite side (figure 3) as cited in the claim.

Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to add the display taught by Hamaguchi to Park and Yano camera system so as to provide a stereocamera that equipped with a display so the stereo image can be displayed in real time.

As per claims 10, 11 and 12, these claims recite what were previously discussed in claims 1, 2 and 3 respectively.

As per claims 19, 20 and 21, these claims recite what were previously discussed in claims 1, 2 and 3 respectively.

As per claim 26, this claim recites what was previously discussed in claim 1.

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park, in view of Yano as applied to claim 26 above, further in view of Johnson, US Patent No. 2,890,618.

As per claim 27, Park and Yano teach the camera module according to Claim 26, they fail to teach an index patterning is arranged in the camera module, to lock the distance between the camera units (CAM1, CAM2) to correspond to the imaging mode.

However, Johnson teaches a camera with a lens turret interlock mechanism that can be lock and unlock with a finger engaging knob. The lens turret has multiple lenses for different mode of operation (col 3, line 75- col 4, lines 1-15).

Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to add the finger lock mechanism taught by Johnson to Park and Yano camera system so as to provide a way to secure the camera assembly such that the camera modules can be manually (finger engaging) locked and unlocked in order to change mode of operation. This method will allow the user to change shooting mode quickly.

Conclusion

10. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure:

Bell, David A. et al. (US 20010026249 A1) Electronic device having a display

Mashitani, Ken et al. (US 20050089212 A1) Method and apparatus for processing three-dimensional images

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Thielemans; Robbie et al. (US 6483555 B1) Universal device and use thereof for the automatic adjustment of a projector

Hirota; Gentaro et al. (US 6064749 A) Hybrid tracking for augmented reality using both camera motion detection and landmark tracking

SANO K (JP 2007135165 A) Double fold type digital camera has two binocular convex lens combined to single unit and LCD monitor which adjusts open angle according to distance of target

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang V. Le whose telephone number is (571) 270-5014. The examiner can normally be reached on Monday through Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Tuan Ho can be reached on (571)272-7365. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Tuan V Ho/

Primary Examiner, Art Unit 2622

/Quang Le/

Patent Examiner

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